

**Notice of Allowability**

Application No.

09/602,512

Examiner

Annan Q Shang

Applicant(s)

RAKIB ET AL.

Art Unit

2614

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filled on 08/09/04.
2. ☒ The allowed claim(s) is/are 1,3-7,9-12 & 13-15 renumbered as 1-13 respectively.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☒ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
- ☐ Examiner's Amendment/Comment
- ☒ Examiner's Statement of Reasons for Allowance
- ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 1, 3-7, 9-15 allowed.
2. The following is an examiner's statement of reasons for allowance:

With respect to claims 1, 9 and 13 of the instant invention is directed to head end apparatus, system for a cable television operator and head end multiplexer system for a central office of a DSL system, for providing video-on-demand service, broadband internet access and other broadband services over T-carrier systems including a pull cherrypicker at the head end. The relevant prior art of record such as **Ovadia et al (6,400,720)** teach a cable television system and a Master Head end providing video-on-demand services, interactive services including Internet access, transporting variable length and fixed length packets in a standard digital transmission frame. **Laubach et al (6,081,533)** teach method and apparatus for application interface module in a subscriber terminal and a cable television head end which provides enhanced services, such as, video-on-demand, telephony, video, ADSL, etc. **Ueno (6,185,736)** teaches information transmission apparatus, traffic control apparatus, method of managing bandwidth resources using the same and method of admitting a call, using variable-rate-encoding. **Schneidewend et al (6,249,320)** teach transmitting programs in major and minor channels where a user can receive the desired program channel (major or minor) for viewing. **Appelman (6,385,656)** teaches selective recompression of files in a network system. However neither **Ovadia, Laubach, Ueno, Schneidewend** or **Appelman** and any of the cited references, teach or suggest, alone or in combination

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the feature of a programmed computer, for a head end for a cable TV system, to optimize the assembly of the output streams of data packets to be transmitted to each customer by "analyzing the number of tuners each customer has and analyzing the current availability of subchannels on one or more logical channels and attempts to create the output streams of data packets so that all the data packets encoding the programs and/or services each particular customer requested are transmitted on subchannels on a number of channels that does not exceed the number of tuners the customer..." which is recited in the instant invention, in combination with other features of independent claim 1;

With respect to independent claim 9, neither **Ovadia, Laubach, Ueno, Schneidewend** or **Appelman** and any of the cited references, teach or suggest, alone or in combination the feature of a cherrypicker multiplexer, for a head end of a cable TV system, including management means for analyzing upstream requests received from each customer and the number of tuners each customer has and for "analyzing the availability of logical channels and subchannels as compared to the number of components of video programs and/or other services requested by each customer and controlling the culling switches in such a way to generate the output streams in such a way such that each output data stream for a particular customer can be transmitted on a number of logical channels which does not exceed the number of tuners the customer has..." which is recited in the instant invention, in combination with other features of independent claim 9;

With respect to independent claim 13, neither **Ovadia, Laubach, Ueno, Schneidewend** or **Appelman** and any of the cited references, teach or suggest, alone or in combination the feature of a control means, for a head end multiplexer system for a central office of a DSL system, for processing upstream program and/or service requests received from users at all customer premises and for "analyzing the number of tuners each customer has and the number of requests each user has made and the bandwidth availability on a bi-directional channel and wideband channel of the DSL line and for generating the culling selection criteria so that many times as possible, the requested programs and/or services are sent on a number of logical channels that do not exceed the number of tuners the customer has..." which is recited in the instant invention, in combination with other features of independent claim 13.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Isono et al (6,216,171) disclose cable modem control method giving priority to packets from the cable head end over packets from the subscriber LAN.

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Hendricks et al (6,201,536) disclose network manager for cable television system headends.


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q Shang** whose telephone number is **703-305-2156**. The examiner can normally be reached on **700am-500pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W Miller** can be reached on **703-305-4795**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC)** at **866-217-9197 (toll-free)**.



**Annan Q. Shang.**



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